

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number  
**WO 2005/013886 A2**

- (51) International Patent Classification<sup>7</sup>: **A61K** Nedom [TR/US]; 712 Wheaton Road, Iowa City, IA 52246 (US).
- (21) International Application Number: PCT/US2003/034686 (74) Agents: RESNICK, David, S. et al.; Nixon Peabody LLP, 100 Summer Street, Boston, MA 02110-2131 (US).
- (22) International Filing Date: 30 October 2003 (30.10.2003) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/422,578 30 October 2002 (30.10.2002) US
- (71) Applicant (*for all designated States except US*): THE CENTER FOR BLOOD RESEARCH, INC. [US/US]; 800 Huntington Avenue, Boston, MA 02115 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): LIEBERMAN, Judy [US/US]; 14 Rocker Street, Brookline, MA (US). SHANKAR, Premrata [US/US]; 46 Hilburn Street, Roslindale, MA 02131 (US). NARASIMHASWAMY, Manjunath [US/US]; 28 Weld Street, Roslindale, MA 02131 (US). SONG, Erwei [CN/US]; 11 Monument Way, Quincy, MA (US). LEE, Sang-Kyung [KR/US]; 175 Freeman Street, #402, Brookline, MA 02446 (US). INCE,
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— *without international search report and to be republished upon receipt of that report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHODS FOR TREATING AND PREVENTING APOPTOSIS-RELATED DISEASES USING RNA INTERFERING AGENTS

(57) Abstract: The present invention is based, at least in part, on the discovery of compositions and methods useful in the modulation, *e.g.*, inhibition, of gene expression or protein activity. In particular, the present invention is based on novel RNA interfering agents, *e.g.*, siRNA molecules which target apoptosis-related genes or proinflammatory cytokines, and result in reduction, *e.g.*, prolonged reduction, of apoptosis-related gene expression or proinflammatory cytokine expression in cells. Inhibition of apoptosis-related gene expression or protein activity or proinflammatory cytokine expression or protein activity, *e.g.*, by the siRNAs of the invention, inhibits apoptosis-mediated diseases or disorders and proinflammatory cytokine mediated diseases or disorders, including, for example, transplant rejection, hepatitis, liver injury, sepsis, and cancer.